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AMERICAN
DYESTUFF REPORTER

A Weekly Publication devoted to

DYESTUFFS, COLORS and ALLIED CHEMICALS

"Circulated Everywhere Dyestuffs are Used"

Vol. 2 New York, March 11, 1918 No. 6

Report of the Meeting of Dyestuff Manufacturers

THE second meeting of the dyestuff manufacturers and dealers was held at the Chemists' Club, New York, on Wednesday, March sixth. This meeting was a sequel to the first conference which was held on January 22nd and 23rd. At the meeting held on January 22nd a committee on organization was appointed with instructions to prepare a report and to submit same at the meeting on March sixth. There was some dissatisfaction at the meeting on January 22nd—the manufacturers feeling that the dealers had no right to membership in the Association, if permanently formed. The manufacturers seemed to feel that only actual producers should be allowed to become members, while the dealers seemed to feel that the organization should be extended to embrace them. After much discussion pro and con on this subject, it was finally settled that the association be formed composed of two classes; first, actual manufacturers who would be designated by Class A, and dealers and distributors who would be known as belonging to Class B. A number of the larger manufacturers were not in sympathy with this arrangement and meetings were called, attended only by actual manufacturers. A special method of procedure was drawn up by these actual manufacturers and submitted to those present at the conference on March sixth; at this meeting Dr. J. Merritt Matthews presented the report of the temporary committee on organization and stated that the committee had obtained the views of certain representative manufacturers and had found them in favor of forming an organization that would be composed solely of manufacturers. He read the following resolution, which has been approved by the committee:

"Inasmuch as the interests of the American dyestuff industry will be better served by having one association consisting of manufacturers only, and a separate association for dealers, now and therefore be it

"Resolved, that the Organization Committee recommends to the meeting of March 6th, that there be formed an association of manufacturers of intermediates and dyes under the name of DYESTUFF MANUFACTURES ASSOCIATION OF AMERICA or some similar name; and that there be formed a separate association consisting of dealers in dyestuffs and bearing an appropriate name.

Mr. H. Gardener McKerrow then submitted *his* suggestion for the proper conduct of such an association as proposed.

Mr. McKerrow's suggestions indicated careful preparation and a thorough knowledge of the subject. This

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Bordeaux B—Crimson Y
Bordeaux 2BX—Tartrazine
Nigrosine

CHROME COLORS
Alizarine Yellow GG
Chrome Yellow G
Meta Chrome Brown
Alizarine Orange R

BASIC COLORS
Methylene Blue—Methyl Violet

DIRECT COLORS
Orange R—Maroon Red—Red
Chrysamine—Violet R
Fast Yellow R

LAKE COLORS
Lake Scarlet 2R—Lake Scarlet 2RX
Acid Orange—Bordeaux B
Methylene Blue—Methyl Violet

INTERMEDIATES

Nitro Benzol, Commercial
Nitro Benzol, Redistilled
(Oil of Myrbane)
Aniline Oil, Aniline Salt
Dimethylaniline, Dinitro Benzol
Metaphenylenediamine
Beta Naphthol, Sulphanilic Acid
Naphthionic Acid, Nitro Xylol
Xylidine, Paranitraniline
Salicylic Acid

In addition to the above we manufacture limited quantities of other intermediates for our own consumption. Also we are developing other items for our own use and on a large scale for the market. On this account we shall be glad to have inquiries from our customers for intermediates not listed above, and we will advise our position on same.

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paper was preserved by the committee for future reference.

In the absence of Mr. Frank Hemingway the meeting was presided over by Mr. B. M. Kaye. After the report of the organization committee had been presented a general discussion from those present was called for on the question of membership. After a num- of speakers had voiced their sentiment it was seen that the dealers were in the minority and Mr. M. R. Poucher moved that an association be formed along the lines set forth in the report of the organization committee. Mr. McKerrow offered an amendment to the effect that the suggestions as set forth in the minority report be adopted. This motion was lost and the suggestions of Mr. Poucher were voted upon and carried. Chairman Kaye then stated that steps of organization were in order and it was voted to elect a board of governors who would be empowered to take the steps necessary in perfecting the organization. The committee as now formed was voted to hold office for a period of one year. The following were then elected as members of the board of governors: George H. Whaley, of John Campbell & Co.; M. R. Poucher of E. I. du Pont de Nemours Co.; Albert Blum of the United Piece Dye Works; K. C. of Jeffcott of the Calco Chemical Co.; August Merz of the Heller & Merz Company; R. P. Dicks of Dicks David Co.; M. S. Orth of Marden, Orth & Hastings Corporation; Frank Hemingway of Frank Hemingway & Co.; L. A. Ault of Ault & Wiborg Company; J. M. Mathews of the Grasselli Chemical Company; Robert A. Kemp of Holliday-Kemp Company, Inc.; E. H. Kilheffer of the Newport Chemical Works; Dr. Samuel Iserman of the Chemical Company of America; Dr. I. V. S. Stanislaus of the Stanley Aniline & Chemical Works; and W. H. Cottingham of Sherwood & Williams.

It was decided that the next meeting be called by a vote of the Board of Governors but it is safe to say that they expect to convene within a short while. Before the adjournment of the meeting it was suggested that a vote of thanks be tendered to Mr. McKerrow for his efforts in helping to bring about closer cooperation of those engaged in the industry. There is some question as to the attitude of some of the larger companies with regard to smaller manufacturers and the REPORTER hopes to be able to publish at a later date an expression from some of the larger companies on this subject.

Fastness of Dyestuffs to Light

IT has always been considered desirable to be able to express the fastness to light of any particular dyestuff by means of a definite figure which would be understood and accepted by the trade at large. It can be readily appreciated that any particular dye varies in fastness according to the depth of its shade and thus causes some confusion when comparisons are made between two dyes that are somewhat different in tone but quite close in their power of resistance to fading. Therefore, we cannot give our hearty en-

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dorsement to the following scheme, but submit it as an example of the efforts that have been made in this direction.

The following standards of fastness are by P. Heermann and are the basis of the second report to the Verein deutsch. Chemiker. (The numbers following the dyes refer to the numbers in the Schultz & Julius tables).

Certain standards prescribed in the first report have been modified and replaced by the following:

Fastness to Light

(1a.) Fastness of dyed cotton. The sample is exposed together with the dyed standard in a box suspended in the open under glass, one half of the object being covered by paper or cardboard. At the Materialprufungsamt two exposures are always made, one under glass and one in the open, subject to all atmospheric influences. Dressed goods are faster to light than undressed goods.

The type standards are: I. 5% of Chicago Blue 6 B (424) dyed at the boil with two additions of Glauber's Salt.

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JERSEY CITY NEW JERSEY

II. 0.8% of Methylene Blue B.G. (659) dyed cold to warm with 2% of acetic acid on a 3% tannin and 1.5% antimony salt mordant.

III. 1% of Indoin Blue on cotton mordanted as in II.

IV. 20% of Kyrogen Violet with 1.5% times its weight of crystallized sodium sulphide, dyed at the boil with the addition of soda-ash and salt.

V. 2.5% of Benzo Light Red 8 B. L. dyed as in I.

VI. 10% of Hydron Blue G., 20% paste (748) dyed at 60° C. with caustic soda and 5% of hydrosulphite.

VII. 8% of Sulphur Black T., extra (720) dyed as in IV.

VIII. 25% of Indanthrene Blue G. C. paste dyed with 6.25% of hydrosulphite and caustic soda.

Fastness of Dyed Wool

(1b.) The tests are carried out in the same way as for cotton; in the case of piece goods the exposure should be made both under glass and in the open. The type standards are:

I. 3% of Indigotin 1a, powder (877) dyed at the boil with 10% of Glauber's salt and tartar.

II. 1.5% of Ponceau R.R. (82) dyed in the same way.

III. 2.75% of Amaranth (168).

IV. 4.5% of Azo Acid Red B. (64).

V. 5% of Acid Violet 4 R.N. (B. A.S.F.) with Glauber's Salt and acetic acid, from 40° C. to the boil, finished at the boil with Sulphuric Acid.

VI. 2.5% of Diamine Fast Red F. (343) after-chromed.

VII. 4% of Anthraquinone Green G.X.N. (864) dyed as in V.

VIII. Indigo (874) dyed to a shade equivalent to 2.4% of Sulphocyanin G.R. extra (257): or 7% of Naphthol Green B., (4) dyed with 10% of Glauber's Salt and tartar, beginning at 50° C. and finishing at the boil for one hour.

The defects of such a system are obvious to all. No account has been taken as to whether the exposure is made under absolutely dry conditions or whether the air is charged with moisture, which factors exert a great influence on the fading of any given dyestuff. We believe that the subject of

fading will eventually be worked out on a basis of the number of hours of exposure to Ultra Violet Rays which any dye will stand. There will be of course a variation in the resistance of different percentages and it will always be difficult for anyone to say at just what point the fading has begun. Fading undoubtedly commences as soon as the sample is dyed but we take no note of it until we are able to perceive it with our eyes. As different observers will make different observations the personal factor will be a considerable one.

INQUIRY DEPARTMENT

AMERICAN DYESTUFF REPORTER:
What use has Lithol Red and similar pigments in the textile industry?

The only outlet for such products is through the calico printers who use Albumen colors. The insoluble color is mixed with Egg Albumen and printed, then steamed and the color is fixed securely on the fibre. There is no way to utilize such colors as dyestuffs, in the ordinary sense of the word.

AMERICAN DYESTUFF REPORTER:
What is the constitution of Wool Blue S, that was on the market before the war? I do not see it mentioned in any of the books and yet it was a popular dyestuff.

Every lot of the Wool Blue S we ever met was a mixture of Acid Green and Acid Violet 6B. There were many of this sort, differing in their ingredients, but the best was made from Fast Green Extra Bluish (Bayer) and Acid Violet 6BN (Badische). The use of Acid Violet 4B or Formyl Violet S4B is not to be commended, as all mixtures containing these products turn very red in artificial light.

There was a Wool Blue B (Sandoz) and Wool Blue N Extra (Bayer), double strength products which were not mixtures, and corresponded in shade to the regular Wool Blue S.

AMERICAN DYESTUFF REPORTER:
I have an opportunity to buy some domestic Fuchsine and Malachite Green which are not quite up to the standard in solubility. Is there any way I can utilize them without danger to my stock?

The procedure in both cases is the same. Dissolve the dye in boiling water with the addition of some Acetic Acid and Alum and boil for 5 minutes. Filter the solution through several thicknesses of cheesecloth and all insoluble specks will be retained. After such treatment it is hardly likely that anything more will separate and the dye solution may be used in the regular manner.

AMERICAN DYESTUFF REPORTER:
Why cannot Acid Blacks be used in light shades and in combinations without causing speckled dyeings?

The principal reason is that few of them are level dyeing. When used in full shades the excess of dyestuff saturates every fibre and this defect is lessened. In light shades or in small quantities the affinity for the fibre is so great that they will not go on evenly and consequently show speckled effects. This might be overcome by the use of an extra amount of Glauber Salt and only a little Acetic Acid instead of Sulphuric Acid. The best way to

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darken any mixture or combination shade is by the use of a color opposite to the predominating shade. Such a method is really cheaper and much safer than using blacks for shading.

Soluble Blue

BEFORE the war this dye had a rather limited use because there were so many other products that covered the same ground. The redder shades were used extensively by laundries, bleachers and paper makers for blueing whites in such cases as permitted the use of a little acid to keep the color bright. Soluble Blue being closely related to Alkali Blue, requires to be in an acid condition, otherwise it becomes decolorized. This property is utilized by silk throusters and manufacturers of white goods for tinting purposes. Silk or wool may be tinted blue with Soluble Blue and pink with Acid Magenta and the weaver may observe the progress of his work without difficulty. After the piece is woven a simple scouring will remove all the color and only a white fabric remains. Under the name of Paper Blue large quantities of the bluer shades were used for both pulp and calendar coloring, it being preferred to basic blues in all cases. Cheap carpet yarns were dyed with Soluble Blue and it was also a favorite color with the Chinese dyers, much of our supply for the period since the war having come from China in the small tins in which it was originally sold.

Many years ago a successful dyer of men's woolen goods, in the piece, used to make his navy blues by first mordanting the pieces with Bichromate of Potash (or Soda) and Tartar, and dyeing with a combination of Logwood Extract and Soluble Blue. Finally there was added about ½% of extra chrome which resulted in a full and fairly fast Navy Blue that was only excelled by the true Aligarines at that time. The Sulphon blues gradually encroached on this method but never gave level shades as easily. At the present time, when the faster blues are needed for navy work, there are many woolen mills that could go back to this old process for

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their lower grades. Soluble blue is now being made in America and it is likely that the supply will soon be ample. We should not confuse Soluble Blue with Soluble Prussian Blue—a chemical color, easily affected by alkalies, but having no dyeing qualities.

Dyestuff Market

Conditions in the dyestuff industry have not been particularly brisk lately. There seems to be a scarcity of spot stocks and this, perhaps, is an important factor in restricting active trading. The freight congestion is also a serious handicap and until this is adjusted we fear business will be of very small volume. The market is strengthened slightly by the scarce supply of raw materials and also the taking over of certain products by the Government has tended to strengthen the market. There seems to be a fair increase in the volume of business now being done in coal tar products. The REPORTER has received numerous inquiries and in answering these we have found some difficulty as there seems to be a limited supply on hand. A number of manufacturers are looking forward with some apprehension regarding the toluol supply and some have expressed themselves as being of the opinion that this scarcity will continue for the duration of the war. One very serious handicap in the delivery of products has been the shipping congestion and we have noted that a number of companies are making deliveries by express, this of course, applying to very small amounts.

We are assured by a large dyewood company that dyewoods and dye bases are moving very slowly on account of the non-arrival of stocks. It is noted that dyers of khaki cloth are eagerly seeking quercitron and prices on this product are holding firm. There is a marked scarcity of heavy chemicals and other chemicals are obtained only in small supplies. Some little activity has been noted in the last few days in heavy chemicals but the situation has not been relieved as the products are immediately absorbed and at high levels.

Indigo Blue Secret

Du Ponts Claim to have Solved German Formula for Indigo Blue

The Government has been advised that the du Ponts have successfully made the first run of indigo blue and produced an article quite up to the German or Swiss standards. This result has been attained by long and painstaking experimentation, starting from the German patented formulæ, which, as an incident of the war status, citizens of the United States may utilize. Owing to the peculiar manner in which the German patents were taken out and the incomplete statement of the formulæ themselves, it has been a tedious process to get the desired results, but this has been accomplished, it is understood, with entire success.

The achievement has come none too soon, as the entire supply of indigo dyes is limited all over the world. This dye is now worth $17,000 a ton.—*Times.*

What Are Your Difficulties?

Some consumers of dyestuffs are experiencing difficulty in obtaining certain colors, if we are to judge by the number of inquiries that have been received this week by the REPORTER. Some time ago, we announced that we would be only too willing to cooperate with the small consumers in helping them to obtain certain colors that they might be in the market for. It will be readily seen that we are in a position to help to a great extent, as we naturally are well-informed as to colors available and new colors that are being offered. We hope that consumers of dyestuffs will not hesitate to make use of this service, which also applies to testing of products and any other information that may tend to better conditions in the industry.—*Editor*

The American Yarn Dyeing & Bleaching Company of Passaic, N. J., has been incorporated with a capital stock of $25,000. The incorporators are, Vera Glass, Louis Wallisch and Alfred Arfstrom.

AMERICAN DYESTUFF REPORTER
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MYRON DREW REESER, Managing Editor

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To Legitimate Dealers in Dyestuffs

While there is a possibility that some provision may be made in the dyestuff Association for the reputable dealers, it may be that there is a sentiment, on their part, that they should have their own association. We feel that an opportunity should be given for them to make some statement and put their views on record. Every dealer in dyestuffs, natural and artificial, is therefore invited to write to this paper a brief letter stating his views. In the event of there being a sufficient interest manifested, to warrant it, we will arrange to bring these now scattered interests together so that the wishes of the majority may be carried out. The recently-organized association does not cover the entire ground but leaves a large field for the dealer, who also has a need for an association.

This is not a time for personal feelings. The thought should be of what may be accomplished for the general good of your business and your relation to manufacturer and customer. The small manufacturer, who is also a dealer, has the same relation to the customer as the plain dealer and while the manufacturer's problems are being worked out by the association just formed, the other problems should not be neglected. If there is a common interest the letters will indicate it, but if the interests are divergent it will be advantageous to rectify them.

While the meeting of the dyestuff association did not result as we had hoped there is no real cause for regret. We have given the movement the fullest publicity since its inception and devoted our time and efforts in the direction of a harmonious association. Even the night before the meeting it seemed that the new plan, which gave each class of members an independent organization, would solve the problem. That this plan was not accepted is partly due to the failure of a number of dealers and small manufacturers to attend the meeting and support the movement, led by Mr. McKerrow, in accord with their expressed intentions. This failure left the burden on its sponsor while those who had been very enthusiastic beforehand either remained absent or reversed their votes.

If the association now represents a body that includes all that is good in the industry then much has been accomplished. We had hopes that the dealers really were interested in a movement for the common good but now must confess our doubts.

Since the meeting several rumors have been persistent—one being that arrangements will be made to take high-class dealers and others interested in the industry into associate membership. This would mean that there would be a reversion to the original plan, but with the distinction that the associates would be carefully chosen before admission, rather than having the undesirables sifted out after taking in a large body of mixed membership.

We hope this rumor is true for it will greatly enlarge the scope and usefulness of the association. The class from whom we will not accept advertisements have no place in the association, but the legitimate dealer has a standing that cannot and must not be ignored.

In the pressure of the business of organization it is not to be expected that many plans for the future can be worked out. These will take time and gradually be worked out as opportunity permits. It is something to have an organization, and if past experiences are to be judged there is a prospect of an excess rather than a dearth of reform movements.

Everyone will be interested in the gradual development of arbitration and standardization. The first can be accomplished quickly but the later means much work and the probable co-operation of outside laboratories.

Publicity and propaganda also call for the help of all who are interested in this vital American industry. No official sanction or authority is needed, just talk American dyes whenever you have the opportunity.

Notes of the Trade

It is reported that the Hollywood Dye Works, dyers of woolen and cotton fabrics, located at 2024 East Willard Street, Philadelphia, Pa., have leased a large building at D Street near Ontario, to which they are now removing their plant equipment. It is hoped that this change will greatly increase their facilities and production.

A company has been incorporated in Dover, Delaware, known as the Cellocilk Company with a capital of $1,000,000 and will engage in the manufacture of imitation silk. The incorporators are Geo. B. Martin, of Philadelphia; J. Vernon Pimm, and S. C. Seymour of Camden, N. J.

Joseph B. Miller, dealer in dyestuffs and chemicals, with main office in Philadelphia, has opened a suite of offices in New York City located at No. 1 Wall Street.

New Color Cards

The Products Trading Company, 396 Broadway, New York; Fred Wetzel & Company, 21 Park Row, and R. Lechner, 200 Fifth Avenue, have recently produced new color cards showing shades of American-made dyes handled by their respective firms.

Some Practical Points of Chrome Blacks

Chrome Blacks for wool, of the Diamond Black type, have always been a source of more or less trouble to the dyer because he assumes that they are to be worked like other after-chrome dyes. It would be better if the dyer would consider them as working like direct cotton dyes on wool, during the

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first part of the dyeing, and depending on the boiling, with only a little acetic acid, to put the color on the fibre evenly.

When the bath is nearly exhausted, a further addition of acid is advisable to completely exhaust the bath. Sulphuric Acid is to be avoided throughout as it produces a redder shade.

The dyestuff itself is particularly likely to foam, more so if dyed in a top dyeing machine, or other circulating pressure type of apparatus. There is also generally a deposit of dark gummy matter around the top level of the liquors.

Both these features are due to certain impurities which accompany the intermediates from which the dye is made. Before the war some types were developed that were free from both defects, but at present we still encounter them.

It is essential that the dyeing be conduced so the coloring matter has a full opportunity to penetrate the fibre before being fixed, otherwise a mere superficial dyeing will result and the fastness suffer in consequence.

In whatever way the acid dyeing comes in contact with the chrome bath the dye will be fixed, and if each fibre is coated with loosely fixed dye there will be a difference from a proper dyeing where the dye penetrates the fibres uniformly.

Chroming not only changes the shade from a reddish tone to a full black but produces an insoluble condition which enables the color to withstand severe fulling. In applying the Chrome however it must be borne in mind that a 6% dyeing only really needs ¾% of Chrome at the most. Any excess oxidizes the black already formed and turns it reddish brown. The addition of the Chrome must be made in such a way that the entire lot will be evenly acted upon. The proper amount may be exactly calculated, but one quarter of the wool may receive it all, and thus be over chromed and reddish, while the remaining three-quarters will be undeveloped and not fast. The acid condition of the dyed wool causing the chrome to combine with it at once without any possibility of boiling it off and equalizing the lot.

Whether to chrome in a fresh bath or in the exhausted dyebath depends on the class of goods dyed. Piece goods and yarns should have a fresh bath, but loose wool, tops, etc., which are later to be washed may be treated in the exhausted liquor. If the shade of the average chrome black is too jet and reddish it may be corrected either with Diamond Green, Naphthol Green or Naphthol Blue Black.

The fastness to scouring is improved by the presence of Acetic Acid in the chrome bath. Fastness to crabbing requires Sulphuric Acid in the chrome bath, at the sacrifice of the tone of the color.

Silk and silk noils may be dyed fast blacks if one precaution is taken. After dyeing a full shade in an acid bath, with at least 15% of dye, have the chrome bath charged with about 2% of chrome and not over 120° F. Leave the silk in the chrome over night, then soap and brighten. Hot chrome will destroy the silk and color as well, but the above process is quite practical.

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Protection of the Dyestuff Industry

This interesting article was sent to the REPORTER by a chemist who commented upon it as follows:

GENTLEMEN:

Enclosed is an article which appeared in a recent issue of the Boston "Transcript."

Having followed closely your editorial policy, I feel that you as well as your readers will be interested in its statistical value.

Very truly yours,

——— Cotton Dyeing Co.

W. B., Chief Chemist.

As a preliminary to recommendations to be made later for a revision of the chemical schedule in the Tariff Act of 1913, the United States Tariff Commission has made a study of the comparative uses and costs of dyes in the textile industry, which is the largest customer of the color maker and a large proportion of whose products depends upon color for salability. The information was obtained from 77 firms, of which 23 were cotton manufacturers representing about 47 per cent. of the total cost of dyestuffs and chemicals used by all the cotton mills in the United States; 25 were wool manufacturers representing 40 per cent. of such cost, 8 silk mills representing 10 per cent. of the cost, and 21 independent dyers and finishers. The report of the commission, which is just coming off the press, presents for the first time a statistical comparison of the use and cost of dyes in 1913, before the war, and in 1916, after the color shortage had been relieved in a measure by the desperate efforts of the American chemical plants to meet the demands made upon them for colors. The whole subject is so technical that an extended discussion of it is not practicable in these columns. It is a matter of common knowledge that the cost of dyes has increased beyond all precedent in the last four years, until now instead of being regarded as an almost negligible quantity in the marketing of textiles the manufacturer often must include the cost of colors as one of the important elements of price-making.

Average results in the four industries reporting may be stated as follows: In cotton manufacture the amount of dyes used has decreased 11.8 per cent. against an increase in total value of 241.5 per cent. In the three other industries an actual increase in quantities has taken place. In wool manufacture the increase in usage has been 72.4 per cent. and in cost 301.2 per cent.; in silk manufacture 19.8 per cent. in quantity against 232.4 per cent. in cost; and the dyers and finishers have used 11.4 more colors than in 1913 of a value 319.4 per cent. greater. Thus the four industries, although they used only one-third more colors in 1916 than

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before the war, paid more than two and one-half times as much for them, or 287.4 per cent. The wide range of individual values of course cannot be indicated by figures of a general character. Thus the cotton manufacturers, although using 64 per cent. less synthetic indigo, for which they formerly paid 15 cents a pound, were compelled to pay $1.15 a pound for what they did use. Sulphur black went from 18 to 60 cents a pound and idanthrene blue from 27 cents to $1.00 a pound. These had been their largest items of color use. They were compelled to turn to the more unsatisfactory vegetable colors, and whereas in 1913 they had used no vegetable indigo, which consequently had no value in cotton mills, three years later they used nearly a million pounds and paid $1.98 a pound for it. The increased price was due in part to the fact that the natural product contains considerably more indigo than does the synthetic article in the marketed form of 20 per cent. paste. Most of the other natural dyestuffs showed a marked increase in use. Logwood went from 5 to 23 cents a pound, with an increase of 267 per cent. in quantity used, and almost twelve times as much fustic extract was used in 1913, at a price a little more than double.

Practically all the manufacturers who replied to the questionnair of the Tariff Commission testified that they were not compelled to shut down by dye shortage, although they had to resort to many adjustments which were unsatisfactory alike to themselves and their customers. As one manufacturer wrote: "As American manufacturers we are not ready to admit that as a nation we are dependent upon Germany for colors and chemicals, so we have kept going on substitutes and the consuming public has shown a disposition to cooperate." The manufacturers as a class pay discriminating tribute to the enterprise of the dye makers in trying to supply them with colors, and no doubt would speak even more warmly of their efforts if the latest productions of the American chemical plants had formed a subject of their comment. In fact, the two most remarkable presentations in this unique report are of the favorable opinions of the textile manufacturers with respect to American dyes and to the advisability of affording them adequate protection against German competition.

American sulphur black, which is one of the prime necessities of the cotton mills, received distinct praise from the cotton men. One manufacturer says: "The American-made sulphur black we are using has more tinctorial power than any German black we have ever used in the same class." Another testifies: "The sulphur black is just as good, and while the other colors are not as good they answer the purpose for which we use them, although not as fast or as uniform in shade." Says a third: "In most instances the American manufacturers have produced satisfactory substitutes for the imported dyestuffs." A more or less general opinion is expressed by the textile men of all four classes that "class for class" the American dyes are practically the same for fastness and quality and often for uniformity. They all stress the

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suggestion that in making comparisons with the foreign product exactly the same classes should be compared; the general trend of opinion is that in the finer colors the Americans have not yet succeeded in matching the foreign product, although an occasional exception to this rule is cited. Says one big woolen concern: "We believe that ultimately our domestic color makers will be able to make almost every color needed. Just now, owing to the difficulty in obtaining intermediates, some of the rare colors (alizarians) cannot be made. These intermediates are contracted for far ahead at high prices for the manufacture of explosives. However, we are confident that when the latter demand ceases, the leading explosive manufacturers will turn at once and be able to supply the demand."

The silk makers appear to have had a little more than their share of trouble with the new dyes, possibly because of the delicacy of much of their product and the special demand for lasting colors. One concern complains that the American-made dyestuffs cannot be worked as uniformly as the imported products, with the consequent lengthening of process and possible injury to the fabric. However, the testimony of the silk men—as of the other textile men, for that matter—is by no means uniform. In a particularly discriminating reply one large manufacturer thus briefly states his case: "The American-made dyestuffs used by us in a very few cases are, in our own opinion, equal in quality, fastness and uniformity to the imported dyestuffs of the same class which we used prior to August, 1914. For example, acid orange and direct black have always been made in this country, and the former has, in many cases, even before the war, been furnished by American manufacturers to the German dyestuff importers. Such other colors as induline nigrosine, certain acid blacks, methylene blue, and methylene violet are also a good quality and uniformity, but we have had trouble, for example, with the lack of uniformity in shipments of fast and acid fuchsine. The quality of some direct yellows is not

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equal to before the war purchases. It is difficult to find fast acid reds which dye level. American-made induline does not fasten as evenly in steaming after printing. We are very much interested in the progress of the American dyestuff industry and believe that eventually the objections similar to the above will be eliminated.

One silk man finds the American dyes lower in strength and brightness and not uniform, another says they are almost as fast and uniform but their tinctorial value is decidedly less, and a third declares that the American-made artificial dyestuffs are the equal of the imported of the same class as regards fastness and uniformity and from two to three times as strong. Obviously, it may be remarked, the textile men have had different experiences with different color makers. Moreover, although the Tariff Commission does not say so, it is well known in the trade that many fly-by-night concerns have gone into dye-making with the hope of huge war profits.

(*Continued next week*)

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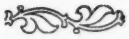

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